

REMARKS

Claims 1-21 are pending in the application. Claims 1-10 and 21 stand rejected. Claims 11-20 are withdrawn from consideration on the basis of an election deemed by the Examiner to have been made by the Applicant. Applicant has amended claims 1-5, 8 and 21. Applicant also has cancelled claims 11-20.

Drawings

The drawings filed on February 26, 2006 are objected to by the Examiner. The Examiner states that “although applicant submitted a formal drawing of Figure 6 in response to the final rejection of 11/28/05, the drawing does not include the corrections made in the informal drawing submitted on 5/6/05.”

Applicant is submitting herewith a professionally drawn sheet containing Fig. 6 and the approved corrections thereto. Applicant respectfully submits that this figure should be acceptable.

Claim Rejections - 35 U.S.C. § 102

Claims 1-4, 9 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by Cleland et al (U.S. 2003/0030299). This rejection is traversed for at least the following reasons.

The Invention

Applicant previously argued that the invention concerns a **door-opening/closing apparatus** for a vehicle having:

- (1) a **door movement detection unit** that detects [*an actual*] closing movement of the door and generates a movement detection output;
- (2) a **judgment unit** that judges whether the door is attempted to be closed and generates a closing attempt output; and
- (3) a **motor control unit** that responds to two express and mandatory conditions, (a) output of the door movement detection unit and (b) output of the judgment unit. As a result of these two mandatory conditions, the unit controls the driving unit to automatically close the door.

In the previous amendment, Applicant argued that the combination of *hardware and software* in the control unit 6, serving as an active and intelligent component and not merely a passive sensor, detects the actual closing movement of the door in the closing direction in response to one or more sensors and operates the drive unit to close the door.

Similarly, Applicant argued that an attempt being made to close the door is determined by the combination of *hardware and software* in control unit 6, serving as an active and intelligent component, in response to one or more of a variety of passive sensors.

Finally, Applicant argued that the **motor control unit** corresponds to the combination of hardware and software in control unit 6 that processes the output from (a) the door movement detection unit and (b) the judgment unit, and provides control signals to a door opening/closing apparatus 7 and/or a closer 8, as disclosed at page 7, line 25-page 8, line 3. Both outputs are necessary to have the door automatically closed, for very clear safety reasons.

In order to overcome the rejections, Applicant has added additional structural limitation that distinguish the invention over the prior art. In this regard, Applicant notes that the door movement detection unit and judgment unit are responsive to different sensors. When the different sensor conditions are detected by both of the respective movement detection units, the motor control unit operates in a manner claimed. Thus, Applicant has amended claim 1 to specify the existence of a first sensor that inputs to the door movement detection unit and a second sensor, different from the first sensor, that inputs to the judgment unit. Two separate sensors are not taught in Cleland.

In particular, amended claim 1 would be distinguishable over Cleland, alone or in combination with other references, on the basis of the following analysis.

Cleland et al

The Examiner has revised his analysis in his *Response to Arguments* at page 6 and now refers to the disclosure in paragraph [0096] of Cleland et al for structure and functions that correspond to the limitations of claim 1. The Examiner now correlates the door movement detection unit and judgment unit as follows:

Door Movement Detection Unit –At page 3, the Examiner identifies the door movement detection unit as position sensor 506 (angle encoder at paragraph [0117] and strut movement detector 204 (stop structure at paragraph [0111]).

At page 6, the Examiner notes that Cleland teaches at paragraph [0096] that, in operation, when the door reaches a “hanging” position, the motor returns to full power as the arm 40 rotates, thereby giving enough force to ensure that the latch 24 of the door is pushed on the striker 26. Presumably, the position of the arm 40 can be determined accurately throughout its entire movement, that is, throughout the closing movement of the door. The Examiner identifies the claimed “movement detection output” as the indication that the door has reached a “hanging position.”

Notably, the sensors used for this feature are limited to the stop structure 204 and door position sensor 506 (again, see paragraphs [0111] and [0117]) alone or in combination with the processor 502.

Judgment Unit – The Examiner notes at page 6 of the Office Action that in Cleland, the structure that judges whether the door has reached the “hanging” position also performs the judgment as to whether the door is attempted to be closed. This structure then generates a closing attempt output in the form of “instructions to the motor to return to full power. Here, the same sensors are used for this function, the stop structure 204 and/or the position sensor 506. There is no teaching that the two sensors are used for separate operations, nor would such operation make any sense.

Motor Control Unit – the Examiner asserts that in response to the movement detection output generated when the door movement detection unit detects the closing movement of the door and when the judgment unit judges that the door is attempted to be closed, the driving unit 534 operates to automatically close the door from the hanging position to the closed position.

The Examiner notes that Applicant argues that the claimed drive unit closes the door when (1) the door movement detection unit detects a movement of the door and (2) when the judgment unit judges that the door is attempted to be closed. The Examiner asserts that in Cleland, when the data from 506 detects movement of the door is hung and the judgment unit

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judges that the door is being closed and has reached that hang point, it gives an instruction to the motor to close the door fully. Again, this analysis uses one sensor for the two corresponding structures, the position sensor 506 or stop sensor 204. These two sensors are not used for separate functions.

The presently amended claim 1 recite the existence of first and second sensors, which are different sensors, the first sensor being coupled to the door movement detection unit and the second sensor coupled to the judgment unit.

Claims 2-4

The dependent claims 2-4 have been amended to define the first sensor.

Claims 5-7

Claim 5 has been placed into independent form as it clearly captures the preferred embodiment, particularly with respect to the second sensor being a human touch sensor, and is different from the prior art. Claims 6 and 7 specify the particular sensor involved.

Claim 8

Dependent claim 8 has been amended to define the second sensor.

Claims 9 and 10

These claims would be patentable for reasons given for parent claim 1.

With respect to dependent claim 21, Applicant would respectfully submit that the Cleland et al reference does not teach the automatic closure of a vehicle door in response to the two express and mandatory conditions in claim 1, each being based upon separate sensors that are used for different purposes. The importance of these conditions has been explained in the specification and the Examiner would only use hindsight to assert that Cleland et al can be modified to provide door operation in response to such conditions. The claims should be considered patentable.

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Claim Rejections - 35 U.S.C. § 103

Claims 5-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cleland et al in view of Pudney (2003/0216817). This rejection is traversed for at least the following reasons.

The three claims would be patentable for the reasons already given with regard to claim 1, from which these claims depend. Pudney does not remedy this deficiency.

The Examiner's comment at page 5 of the Office Action relates to the opening of a vehicle. This analysis is no longer applicable given the Examiner's new interpretation of Cleland. There is no teaching or suggestion as to why one skilled in the art would use a touch sensor or temperature sensor in connection with the operation of the Cleland door, during a time when there is movement from a "hanging position" as suggested by the Examiner at page 6. To the extent that the Examiner creates an additional arrangement not taught or suggested by the prior art, either structurally or as a problem to be solved, the Examiner clearly is using improper hindsight based on the Applicants own claims and disclosure.

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cleland et al in view of Flick (2003/0001728). This rejection is traversed for at least the following reasons.

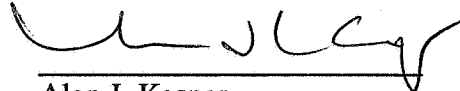
The claim would be patentable for the reasons already given with regard to claim 1, from which this claim depends. Flick does not remedy this deficiency.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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